

ORDER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

2500.8A

4/9/93

FUNDING CRITERIA FOR OPERATIONS, FACILITIES AND EQUIPMENT (F&E),
AND RESEARCH, ENGINEERING AND DEVELOPMENT (R,E&D) ACCOUNTS

SUBJ:

1. **PURPOSE.** This order defines funding criteria for the Federal Aviation Administration's (FAA) Operations, F&E, and R,E&D accounts. The formulation and execution phases of the budget cycle are to be carried out in accordance with the provisions of this order.
2. **DISTRIBUTION.** This order is distributed to the branch level in Washington headquarters, regions, centers, and to field sectors and facilities.
3. **CANCELLATION.** Order 2500.8, Operations vs. F&E Funding, dated April 7, 1965, is canceled.
4. **EXPLANATION OF CHANGES.**
 - a. The major revisions to Order 2500.8 (April 7, 1965) include guidelines for the R,E&D account and an explanation of the differences between "development" funding in the R,E&D and F&E accounts.
 - b. To supplement the guidelines, this order includes three appendices:
 - (1) "Appendix I, A-109 Major System Acquisition Process," to outline the phases of work to be undertaken. This is of particular importance in understanding the differences between development work in the F&E account and that to be accomplished in the R,E&D account.
 - (2) "Appendix II, FAA Funding Matrix for R,E&D and the F&E Accounts," which identifies specific circumstances to show which account is to be used to fund a phase of a program in accordance with OMB Circular A-109.
 - (3) "Appendix III, Summary of Funding Standards and Exceptions for Selected Items of Cost Common in All Accounts," which is intended as a quick reference to funding standards and exceptions on selected costs that are discussed in paragraphs 8, 9, 10, and 11 of this order.
5. **POLICY.** The FAA is required to use appropriated funds in accordance with the acts of Congress (Public Laws) that provide the appropriations. Criteria are provided in this order so that the terms and intent of those acts are applied consistently and uniformly. Choosing to fund costs from appropriations merely for convenience or for the solution of transient funding problems in a manner inconsistent with the law and this order is not permissible.

(2) Agency-wide administrative services including: legal services, procurement, recurring real property requirements, material management (including building and equipment leases/rentals, e.g., employee housing)*, office furnishings, supply services, acquisition and management of spare parts, personnel/budget/accounting services (including payroll), communications, administrative automated data processing (ADP), and information resource management (IRM) planning (Direction, Staff and Support; NAS Logistics; and Human Resource Management activities).

* See subparagraph 10.e. for further discussion on leases.

(3) Policy, planning, and executive direction and management of all FAA programs (Headquarters Administration activity).

(4) Leased and purchased administrative and operational telecommunications services (Leased Telecommunications activity).

(5) Development, publication, and administration of safety standards, rules, and regulations applicable to airmen and aircraft operations (Regulations/Certification activity).

NOTE: Direct R&D work leading to the development of standards, rules, and regulations is to be funded in the R,E&D account. See subparagraph 11.d. of this order.

(6) Systematic registration and recordation of airmen and aircraft and performance of the aviation medicine program to maintain a high level of aviation safety (Aviation Standards activity).

(7) Monitoring the accuracy of signals emitted by air traffic control (ATC) devices and aids to air navigation and landing (Aviation Standards activity).

(8) Planning, directing, managing, evaluating, and enforcing civil aviation security (Security activity).

(9) Protecting the safety of passengers, crews, aircraft, and airports (Security activity).

(10) Provides resources necessary to develop the comprehensive plans for the R,E&D and the F&E accounts that are dedicated to achieving the FAA mission and to oversee R,E&D and F&E programs both in-house and contractual. Provides funding for the management and leadership necessary to direct, coordinate, control, and ensure adequacy of FAA plans and programs for system acquisitions, engineering, and management activities of the NAS (NAS Design and Management).

(11) Planning, development, capacity enhancement, and safety certification of public airports (Airport activity).

(12) Support for the FAA work force in the areas of recruiting, training, and human resource management programs (Human Resources Management activity).

(2) Procurement and Modernization of Air Traffic Control Facilities and Equipment (Activity 2, P&M/ATC).

Capital procurement that provides products for or in direct support of ATC facilities, flight service facilities, as well as other navigation and landing aids (i.e., centers, towers, stations, surveillance, navigation and landing aid facilities and equipment). Projects funded in this activity will have procurement maturity and usually include items for which all development work has been completed or include non-development items such as commercial off-the-shelf equipment. Projects included must be approved for full-scale production before or within the budget year and by which also will have approval at KDP-4 before or within the budget year.

Examples of projects funded in this activity include:

- (a) Long Range Radar
- (b) Terminal Doppler Weather Radar
- (c) Flight Service Facilities Improvements
- (d) Direct support projects, such as:

- 1 Fuel Storage Tank Replacement/Monitoring
- 2 Land/Easement Purchases for Existing Airway facility
- 3 Flight Inspection Aircraft

(3) Procurement and Modernization of Non-Air Traffic Control Facilities and Equipment (P&M/Non-ATC).

Capital procurement that provides hardware, software, and construction improvements required for NAS facilities and equipment support. This activity includes projects for which the end products are not directly related to or attributable to other F&E projects required by or for air traffic control facilities or navigation and landing aid facilities. Projects in this activity represent the FAA's assessment of the various hardware, software, and construction improvements required for NAS supportability. Projects in this activity will have procurement maturity and usually include items for which all development work has been completed or include non-development items such as commercial off-the-shelf equipment. Projects included must be approved for full-scale production before or within the budget year and by which also will have approval at KDP-4 before or within the budget year.

Examples of projects funded in this activity include:

- (a) Automated Data Processing Facilities Management better known as "CORN." F&E funds applications conversion and process transition. After full implementation, the service contract will be funded by charge-back to the account that funds the work requirement that utilizes CORN.

The following categories of costs are included:

(a) Funds all direct and related costs of Personnel Compensation, Benefits and Travel (PCB&T) to support the F&E work force in establishment, test and evaluation, installation, and repair/rehabilitation of facilities and equipment for redeployment within the NAS and the accomplishment of airborne certification of facilities and equipment. Note: Repair/Rehab involves equipment which can be economically rehabilitated and returned to the field for use and applies to major equipment and systemwide deployment (e.g., refitting of ASR-7/8 for redeployment).

(b) Funds direct and related costs of PCB&T to support F&E quality control specialists and certain contract specialists in Washington headquarters. Quality control specialists review and monitor contractor performance and provide inspection of plants, equipment, materials, and services. Contract specialists are responsible for the solicitation, negotiation, award, and administration of the FAA headquarters contracts for investment projects.

(c) Funds direct and related costs of PCB&T to support Washington headquarters project and program management, project implementation planning, and directly related support functions.

(d) Also funded in F&E are costs of personnel authorized in the Operations account who are performing on a limited basis in a cross-utilization status and are performing direct work on F&E projects. Work accomplished by this means is usually for economic reasons where time and travel cost savings may be achieved. In this case, cost would be initially recorded against the account paying the employee (e.g., Operations) and then adjusted by transfer of the cost to the F&E account (Activity 5). Costs funded in this manner include: Salaries (including required back-up overtime), benefits, and related travel. See FAA Order 1380.26A, "Cross Utilization of Regional F&E and Operations Funded Manpower" for additional information on this policy.

10. FUNDING DETERMINATIONS FOR SELECTED ITEMS IN OPERATIONS, F&E, AND R,E&D ACCOUNTS. Since classes and purposes of costs are sometimes similar in all three accounts, the following specific guidance is provided for selected cost items:

a. Personnel Compensation and Benefits (PC&B). Salaries and benefits are budgeted for and paid from the account where the positions are authorized. By exception, there are certain personnel (e.g., Operations personnel performing direct work on F&E projects, including backup overtime and F&E personnel performing direct work to satisfy Operations requirements) that are to be funded by the benefiting account. In both cases, performance would be on a limited basis. In either case, cost would be initially charged to the account paying the employee and then adjusted by transfer of the cost to the benefiting account.

e. Leases. By practice, various forms of lease agreements to procure leased services, lands, structures, or equipment (including aircraft) are funded to some degree in all of the accounts covered by this order. In the interest of efficient resource allocation through well informed decisionmaking, decisions to lease or to purchase should always be supported by appropriate lease-purchase analyses, and development of those analyses should be a routine part of acquisition planning. When analyses support the lease option, the following standards and exceptions are to be applied.

(1) As a standard, the Operations account is to fund:

(a) All operating (including leased services) or capital leases (including lease-purchase) for all administrative uses and all support purposes that are not directly required as services, equipment, or facilities that are used to provide air traffic control services or navigation/landing aids. Also see paragraph 8.b(2) for related discussion.

(b) All leased telecommunications costs except those to be F&E funded as provided for in subparagraph 10.k. of this order.

(2) As a standard, the F&E account is to fund:

(a) The long-term capital leases at the Aeronautical Center and the Technical Center.

(b) Capital leases (including leases to purchase) or operating leases (including asset costs in leased services agreements) that are for services, equipment, or facilities that are used to provide air traffic control services or navigation/landing aids or to provide direct support to such services or aids.

(3) In leased service contracts used to provide air traffic control services or navigation/landing aids, estimates are to be distributed between asset (capital) costs and operational expenses and funded respectively in the F&E and Operations accounts.

f. Equipment Maintenance Contracts. Maintenance contracts are to be funded in the Operations account with the following exception. Maintenance contracts on new equipment procured by the F&E account may be funded in the F&E account for up to one full fiscal year following the year of commissioning, if required, to allow time to integrate the requirements into the Operations account. The transition of contract maintenance funding from F&E to Operations is to be accomplished on a facility-by-facility basis. Therefore, where the commissioning schedule is on a project/program basis and may be spread over a 2, 3, or 4 year period, the maintenance contract may require both F&E and Operations funding in the later years of the project implementation. The purpose of the facility phased transition is to allow the Operations appropriation (base) to build up in gradual or in small increments and not have a large increase in one year as would occur if transition from F&E to Operations did not take place until the last facility was commissioned.

k. Leased Telecommunications. Costs of the Telecommunications Management and Operations program are to be funded in the Operations account. All leased operational and administrative telecommunications costs are to be funded in the Operations account, with the exception of:

(1) The F&E account is to fund non-recurring site preparation and facility-end connection costs associated with leased circuits that are required for the fielding of new F&E equipment. Funding is to be included in the relevant project cost estimates.

(2) F&E may fund recurring leased telecommunications costs for new F&E equipment coming into the system for up to one full fiscal year beyond the year of commissioning/operation. Funding is to be included in the relevant project cost estimates.

(3) The F&E budget item, "Critical Telecommunications Support," identified in the FY 1993 Congressional submission as Budget Item 2A20 provides for non-recurring costs associated with change-over of existing circuits. Costs for such tasks as: addition of transmission circuit drop-insert capability, capacity expansion, circuit cut-overs, terminal equipment rearrangements, switching system minor expansions, and FAA procured equipment for use with leased services are included. Costs for such tasks should continue to be included in this F&E budget item.

l. Technical Center Facilities. The Technical Center provides test and evaluation support to the R,E&D, F&E, and Operations funded activities. This support is budgeted on a shared basis, based on facility usage. These facilities and supporting functions will continue to be financed on a shared basis from the R,E&D, F&E, and Operations accounts.

11. RESEARCH, ENGINEERING, AND DEVELOPMENT ACCOUNT.

a. Appropriation Language. As defined in the appropriation language, the R,E&D account is: "For necessary expenses, not otherwise provided for, for research, engineering, and development, in accordance with the provisions of the Federal Aviation Act of 1958, as amended (49 U.S.C. App. 1301 et seq.), including construction of experimental facilities and acquisition of necessary sites by lease or grant, . . ." and for unique provisions as may be specified.

b. General Application. This account funds research, engineering, and development programs to improve the NAS by increasing its safety, security, productivity, capacity, and environmental compatibility to meet the expected air traffic demands of the future. The FAA has R&D programs that fall into the categories of "basic research," "applied research," and "development" as described in subparagraph 11.c. R&D programs are funded on a project basis. This account also funds direct federal salaries and benefits as well as related costs of FAA personnel implementing projects funded by the R,E&D account.

(b) In some instances where development is accomplished under the "build" concept, where within a segment of the project development all alternative design concepts are identified, explored, optimum alternative solution selected, demonstrated, tested, and accepted before going to the next build level, work may be retained in the R,E&D account through design integration--KDP-4 approval. A project under these conditions would then migrate to the F&E account for the production build (e.g., software development initiated in the R,E&D account).

12. OMB CIRCULAR A-109. In all accounts, acquisitions are to be in compliance with controls and guidance provided in OMB Circular A-109. In establishing federal policy for major system acquisitions (MSA's), OMB Circular A-109 defines a major system as a program that is critical to fulfilling an agency's mission, entails the allocation of relatively large resources, and warrants special management attention. While some projects in R,E&D and F&E are not considered MSA's, the approval steps described in A-109 for MSA's are to be applied to all R,E&D and F&E projects.

a. The A-109 major system acquisition process, as it is applied to FAA programs, is divided into five progressive phases: identification of mission needs, identification and exploration of alternative design concepts, demonstration of alternative design concepts, full-scale development, and limited production and full production. See Appendix I for the A-109 MSA Process Diagram.

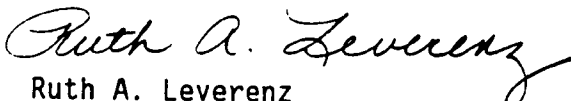
b. After each of the first four phases cited above, the agency head is required to evaluate the cost, schedule, and performance of major projects and affirm the need for those projects. At each of these KDP's, the agency head is required to determine whether the project is ready to move to the next phase of the acquisition process.

(1) KDP-1 involves approving the mission needs statement and starts the major system acquisition process by granting authority to explore alternative system design concepts.

(2) Advancement to a competitive test/demonstration phase may be approved at KDP-2 if the agency's mission needs and program objectives are reaffirmed and the results of analysis of alternative design concepts can be shown to support selection of one or more of the alternatives for concept development and demonstration.

(3) Following reconfirmation of mission needs and program objectives, and verification that the chosen system concept design is sound and risks are acceptable, the agency head may authorize full scale development at KDP-3.

(4) After satisfactory test results and reconfirmation of mission needs and program objectives, the agency head may authorize full production at KDP-4.



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A-109 Major System Acquisition Process

Phase 1: Determine Mission Needs

- Identify Mission Needs and Develop Mission Needs Statement
- Develop Program to Satisfy Needs

Key Decision Point 1

Approval of the mission needs statement starts the major system acquisition process by granting authority to explore alternative system design concepts.

Phase 2: Identify and Explore Alternative Design Concepts

- Identify Alternative Design Concepts
- Select Most Promising Design Concepts for Further Exploration

Key Decision Point 2

Advancement to a competitive test/demonstration phase may be approved when the agency's mission need and program objectives are reaffirmed and when alternative system design concepts are selected.

Phase 3: Demonstrate Alternative Design Concepts

- Design and Fabrication (normally involves a prototype)
- Test and Evaluation

Key Decision Point 3

Following reconfirmation of the mission need and program objectives and verification that the chosen system design concept(s) is sound and risks are acceptable, the agency head may authorize the next phase.

Phase 4: Full-Scale Development and Limited Production

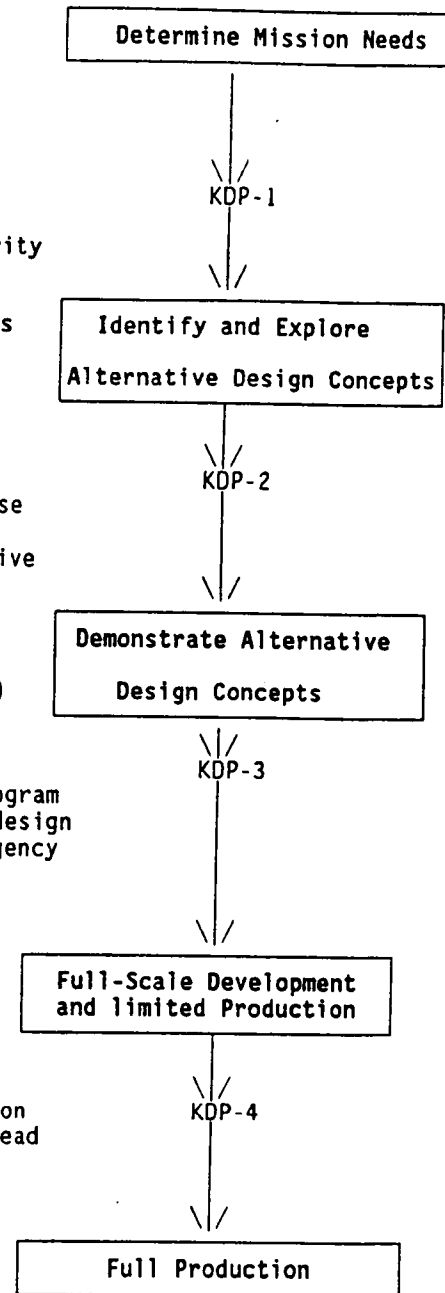
- Full-Scale Development
- Independent Tests of System Performance
- Demonstration in Expected Operational Environment

Key Decision Point 4

Following satisfactory test results and reconfirmation of mission need and program objectives, the agency head may authorize full production.

Phase 5: Full Production

- Full Production
- Deploy Systems for Operational Use



**Summary of Funding Standards and Exceptions
for Selected Items of Cost**

This appendix is intended as a quick reference to funding standards and exceptions on selected costs that are common to and may cut across all three accounts. See paragraphs 8, 9, 10, and 11 of this order for details on these items. The subparagraphs of paragraph 10 are outlined below:

**Paragraph 10
Reference**

	<u>Standard</u>	<u>Exception</u>
a.	PCB - Paid from account where position is authorized.	Operations pays for other account personnel performing direct work on Operations requirements. F&E pays for other account personnel performing direct work on F&E projects. R,E&D pays for other account personnel performing direct work on R,E&D projects.
b.	PCS - Paid from receiving account in which transferee's salary is to be paid.	F&E pays PCS for major establishment and consolidation efforts regardless of where transferee's salary is to be paid.
c.	Travel - Paid from account where salary is paid.	Same exception as for reference a.
d.	Training Equipment, Course Development, and Contractor Provided Instruction - Paid from account from which trainees' salaries are paid.	F&E pays for: (1) Equipment for new and recurrent training on F&E procured equipment. (2) Course development and course materials for new equipment. (3) Initial contractor provided instruction on new equipment until moved in-house.

4/9/93

2500.8A
Appendix III

**Paragraph 10
Reference**

Standard

Exception

- | | | |
|----|--|---|
| i. | Software Development and Maintenance - Paid from the the Operations account for routine maintenance and revisions to operational systems. | F&E pays for:
(1) Development and production of software for new systems related to new F&E projects.
(2) New software or major enhancements to current software that is to be hosted on existing F&E equipment. |
| j. | Emergency Restoration - Paid from Operations or F&E based on guidance in this order. | (1) Operations pays for Operations salaries and expenses, including overtime, and for travel and support.

(2) F&E pays for equipment, construction, and installation costs to repair or replace damaged operating equipment and facilities. |
| k. | Leased Telecommunications - Paid from Operations account. | F&E pays for:
(1) Non-recurring site preparation and facility-end connection costs for leased circuits required for fielding new F&E equipment.
(2) Recurring leased telecommunications cost for new F&E equipment for up to one full fiscal year beyond commissioning/operation.
(3) Non-recurring costs for change over of existing circuits. See F&E budget item "Critical Telecommunications Support." |
| l. | Technical Center Facilities - Paid on a shared basis from all accounts. | Operations, F&E, and R,E&D pay costs on a shared facility usage basis. |